

Hollingworth's pioneering longitudinal study

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Abstract

Although research has been conducted into investigating effective intervention programs to remediate underachievement in gifted students, many studies have reported limited success (Hoover Schultz, 2005; Reis & McCoach, 2000). The aforementioned Australian statistics regarding underachieving gifted students indicate the urgent need for research studies to trial potential intervention programs, comprised of practical teaching strategies, to find successful ways of combating the underachievement of gifted students in Australian high schools. In fact, Siegle (2012) identified that the experience of gifted students at high school can be crucial to their future success: "What we do know is that if nothing is done, many underachievers will not catch up after they leave high school". The study documented in this article trialled an intervention strategy: a part-time withdrawal program, in which two students were guided through a specifically designed series of creative writing tasks. The study focused on creative writing, as the data collected on the selected gifted student-participants identified this as an area in which they were underachieving.

Keywords: students, underachievement, possibility, effectiveness.

Gifted students present some of the greatest challenges, and possibly some of the most memorable experiences, for teachers. To teach gifted students effectively, teachers are reminded to consider the experiences of gifted students themselves including how they are labelled, how they de-

velop their identity and how they experience schooling (Coleman, Micko & Cross, 2015). Despite the increased number of studies over the past few decades that have researched gifted students and how to teach them, a significant proportion of gifted students are often overlooked: underachieving gifted students. Compounding the issue, the paradoxical terms used to describe such students, "gifted" and "underachiever", can be quite contentious, laden with a variety of meanings.

Whitmore's (1980) seminal work, *Giftedness, conflict and underachievement*, challenged the lack of attention gifted students had received in education research, causing a resurgence of interest in the 1980s and 1990s. This led to some of the first researched strategies into remediating underachievement. For example, a report by Richert, Alvino and McDonnell (1982) acknowledged the lack of identification procedures in place for effectively recognising underachieving gifted students. In more recent years, Peters and Engerrand (2016) noted the under-representation of students from low income families and some cultural groups to be a "major barrier to great equity in the identification of students for gifted and talented programs" (p. 1). Betts and Neihart (1988) found that gifted underachievers are individuals with distinctive behaviours, feelings and learning needs (p. 252), and thus any intervention strategy must first consider the unique underachievement of the individual. Other authors have identified that, typically, underachieving gifted students seem to demonstrate a low self-concept or self-image (Fine & Pitts, 1980; Reis & McCoach, 2000; Whitmore, 1980). Since the 1980s and 1990s more researchers and educators have reported on the cause of underachievement in gifted students and issues that need to be considered to effectively remediate underachievement. For example, Siegle (2012) reported that, to reverse the cycle of underachievement, a number of factors need to be present in gifted students including a belief that they can perform well and succeed, an ability to set realistic goals and a perception that their work is meaningful.

However, to understand the notion of an underachieving gifted student, it is first necessary to acknowledge the history of research, dating back to the 1920s, on defining "giftedness". Since the Stanford-Binet Intelligence Scale was applied as a selection criterion for "giftedness", as reported in the Terman studies (1925), other definitions or markers of giftedness have emerged in research, such as Gardner's theory of multiple intelligences (Ramos-Ford & Gardner, 1991). He asserted that there were at least seven intelligences and each individual has strength in at least one of

these fields (pp. 55, 63). The underlying assumption of Gardner's model is that everyone is gifted. Even so, while every person may have gifts, typically the research in this field challenges Gardner's assertion (Colangelo & Davis, 1991, p. 4; Gagné, 1993; Senate Select Committee, 2001, pp. 6, 21-22).

The research typically defines giftedness as high potential in one or more domains (Davis, et al., 2011, p. 287; Gagné, 1993; Lassig, 2009; Senate Select Committee, 2001). The equating of giftedness with potential is a particularly useful definition in the context of this study, as it allows scope for the possibility of underachievement amongst gifted students. Gagné's (1993) differentiated model of giftedness and talent hinges upon the premise that giftedness is associated with potential. Furthermore, this model was cited in the inquiry of the Australian Senate Select Committee for the Education of Gifted and Talented Children (2001, pp. 7, 20), as it "recognise[d] the gifted student who may be underachieving... or prevented from realising his or her potential".

Although no universal definition exists for underachievement in association with giftedness, it is generally recognised as a "discrepancy between a measure of potential and actual productivity" (Davis, et al., 2011, p. 288) or "a failure to demonstrate academic performance commensurate with potential" (Landis & Reschly, 2013, p. 222). Underachievement in gifted students is fundamentally identified as an incongruity between a student's potential to achieve and the student's actual performance (Baum, Renzulli, & Hebert, 1995; Davis, et al., 2011; Dowdall & Colangelo, 1982; Gallagher, 1991; Reis & McCoach, 2000; Rimm, 1995; Senate Select Committee, 2001; Whitmore, 1980). Furthermore, Gagné's model (2007) identified the possibility for underachievement through his representation of giftedness and demonstrated performance along a continuum. Progress along this continuum is impacted by three main factors: environmental factors, intrapersonal factors and chance (2007, p. 95). This model, thus, demonstrates that those identified as gifted may not realise their ability in demonstrated performance if the aforementioned catalysts impede their progress. Gagné's assertion is that one's social and familial context, the provision of education, intrinsic motivations, temperament and well-being all impact fulfillment of potential. Therefore, underachievement can be understood as a failure to convert exceptional potential ("giftedness") into exceptional demonstrated performance ("talent"), as internal and external factors impact this transformation process. Gagné's definition of undera-

achievement as unfulfilled potential has shaped the criteria for students' participation in this study.

Although there is now a wealth of research into identification, definitions and profiling of underachieving gifted students, fewer studies have reported on effective practical strategies and programs for the remediation or reversal of underachievement (Coleman, et al., 2015; Gallagher, 1991, p. 16; McCoach & Siegle, 2003, p. 415; Peters & Engerrand, 2016; Reis & McCoach, 2000, p. 165; Ritchotte, et al., 2014). There appears to be no single intervention strategy for reversing underachievement in gifted students that has met with significant documented success, perhaps due to the diversity within the population of underachieving gifted students. However, Siegle's (2012) work on recognising, understanding and reversing underachievement put forward strategies to address issues of perfectionism in gifted students, as well as how to increase their confidence to learn, while Landis and Reschly (2013) have suggested measures for identifying lack of engagement as a factor in underachievement. Reis and McCoach's (2000) seminal work *The underachievement of gifted students: What do we know and where do we go?*, provides a comprehensive summary and evaluation of the research into the area of underachievement. Importantly, these researchers have made suggestions for further research into intervention programs, and teaching strategies that are likely to reverse underachievement in students who have been identified as being gifted. In recent years, student engagement has been used as a lens through which the underachievement of gifted students has been examined (Landis & Reschly, 2013). Additionally, the experiences of gifted students in schools have also been examined (Coleman, et al., 2015).

Considering that underachieving gifted students comprise such a significant proportion of the gifted student population (Davis, et al., 2011; Hoover Schultz, 2005; Senate Select Committee, 2001, p. 14; Weiss, 1972), with some statistics suggesting up to half of the gifted student population (Australian Senate Select Committee, 2001), there is an pressing need for research into this area. It is necessary to identify effective and practical strategies that can facilitate the achievement of potential in underachieving gifted students in school-based contexts and thus reverse underachievement in gifted students (Siegle, 2012).

Modification of the educational environment may meet with success in reversing underachievement in gifted students (Fine & Pitts, 1980, p. 53; Reis & McCoach, 2000, p. 165; 2005; Whitmore, 1980, p. 398), a notion Gagné has identified as a catalyst for achievement in his aforemen-

tioned model (1993, 2007). VanTassel-Baska and Stambaugh asserted that without appropriate modification or differentiation, gifted students will "regress" in their performance or underachieve (2005, p. 212). Although differentiation is widely acknowledged as necessary in providing opportunities for students to learn according to their ability, differentiation is often poorly implemented for gifted students (VanTassel-Baska & Stambaugh, 2005). Maker's (1982) model contended that for curriculum differentiation to be effective for gifted students, modifications should be considered across the following four domains: learning environment, content, process and product. Additionally, Maker's model identified the following differentiation tools as effective for gifted students to maximise both their engagement and learning: learner-orientated activities; encouragement of autonomy; freedom of choice; discovery and inquiry approaches; real life problems, audiences and evaluations; and, instructional methods that stress use of rather than acquisition of information.

Methodologically, Coleman, Guo and Simms Dabbs (2007) have documented that there is a trend towards more qualitative research methods in recent studies that have sought to investigate the phenomenon of underachievement in gifted students. Though not an exhaustive list, such qualitative approaches include the case studies of Bishop (2000), HŽbert (2001) and Hettinger and Knapp (2001) involving data collection consisting of researcher observations, interviews and analysis of school documents. This is a significant methodological trend as previous research findings have consistently emphasised that underachieving gifted students are a diverse group and require an individualised approach to investigating intervention strategies (Reis & Renzulli, 2009, p. 233; Senate Select Committee, 2001, p. 11). Moreover, Coleman, Micko and Cross (2015) have suggested the necessity for capturing the perspective and voice of the underachieving gifted student in order to grasp the nature of gifted underachievement pertaining to the individual.

Research design

This research study was based on a qualitative design, incorporating an in-depth case study approach, in which two male Year 7 students at a New South Wales high school, participated in a specifically designed Creative Writing Program. The qualitative nature of this study drew on the perspectives and opinions of the various participants by "asking broad, general questions" to determine the answers to the research questions (Creswell, 2005, p. 39). The case study approach enabled "the collection of very extensive data to produce understanding of the entity being

studied" (Burns, 2000, p. 460). The Creative Writing Program, designed purposely for this study, sought to facilitate learning as student-participants were guided through a series of narrative-based creative writing tasks. By its very nature, the Creative Writing Program was flexible enough to accommodate the prior knowledge, learning needs, interests and learning pace of the student-participants. In order to be involved in this study, both participants were identified as "gifted" students. Additionally, there was an observable discrepancy between the student-participants "gifted" potential and their demonstrated performance, particularly in the area of creative writing.

The purpose of the research study reported in this article was to trial a part time withdrawal intervention program, the Creative Writing Program, with underachieving gifted students and to determine which, if any, teaching strategies were successful in facilitating the students' achievement of potential. This intervention program was informed by the aforementioned theoretical research into underachieving gifted students and was comprised of practical and differentiated teaching strategies to reverse underachievements.

The following two research questions, which reflect the purpose of the project, were used to guide the study:

What is the impact of a specifically designed part time withdrawal program (the Creative Writing Program) on an underachieving gifted student?

What teaching strategies are successful in facilitating the achievement of potential in an underachieving gifted student?

Participant selection

The process of selecting participants for the study was guided by the aforementioned definitions of giftedness (Davis, et al., 2011; Gagné, 1993, 2007; Reis & McCoach, 2000; Whitmore, 1980) and underachievement (Davis, et al., 2011; Montgomery, 2009; Reis & McCoach, 2000; Whitmore, 1980). In order to be eligible for participation in this study, the gifted student must have been identified as underachieving according to Reis and McCoach's (2000) definition: underachievement is a "discrepancy between expected achievement... and actual achievement" that "persist[s] over an extended period of time" (p. 157), and Betts and Neihart's (1988) 'Profiles of the gifted and talented'. The two students who fulfilled the criteria, referred to from here using the pseudonyms Nathaniel and Luke, were also identified to be underachieving in the area of creative writing. It was coincidental that both students were male. Selection of these

students was not based on an intention to compare them or consider the relationship between gender and underachievement. Rather, two case studies permitted a richer exploration of the impact of the Creative Writing Program on two different underachieving gifted students.

The participants in this study were two male Year 7 students. Nathaniel was an 11 year-old gifted student in Year 7. Psychometric testing had shown strong evidence of Nathaniel's giftedness, as his composite score ranked him in the 99.91st percentile with a "Standard Age Score" of 150. His results in school-based standardised testing and evidence from the teacher-participants further corroborated this, with the school administered ACER Online Placement Instrument (OPI) placing him in the 100th percentile. However, Nathaniel also exhibited underachievement, especially in the area of creative writing. His performance during in-class creative writing tasks was not consistent with his exceptional standardised test results, as attested to by Nathaniel's teachers. Thus, Nathaniel was identified as an underachieving gifted student. Nathaniel's participation in the Creative Writing Program involved eight 50-minute sessions, over a period of seven weeks. Throughout the Program, Nathaniel was guided through a series of creative writing tasks, towards eventual completion of his own short story.

Luke was a 13 year-old boy in Year 7. He had not been formally psychometrically tested. However, Luke's results from his school-based standardised tests and evidence from the teachers-participants involved in this study indicated that Luke was gifted. The ACER Online Placement Instrument (OPI) placed him in the 92nd percentile. Evidence collected through interviews with Luke's teachers and his family members, in addition to school documents and samples of his work, suggested that Luke's potential was inconsistently demonstrated, especially in relation to his school tasks. Luke's participation in the Creative Writing Program involved six 50-minute sessions, over a period of seven weeks. Luke was guided through a series of creative writing tasks, towards the eventual completion of his own short story.

The Creative Writing Program was planned as a one-to-one part-time withdrawal program. Although nine lessons in total were planned, Nathaniel attended eight lessons, and Luke attended six lessons. Their absences were due to sickness or other unavoidable absences.

The content of the Creative Writing Program was informed by the Social Model of Writing (Harris, McKenzie, Fitzsimmons, & Turbill, 2003), which encouraged students to write as readers, and read as writers.

Each lesson covered a key element of narrative, such as characterisation, setting and plot development. Based on teacher and researcher observations, and interactions with Nathaniel and Luke, the Program was differentiated in its delivery in order to be flexible to the interests, prior knowledge, learning needs and learning paces of the individual student-participants.

Data gathering and analysis processes

In order to investigate the impact of the Creative Writing Program on the underachieving gifted student-participants, data were collected from a range of sources and perspectives before, during and after the implementation of the Creative Writing Program. The data gathered included: semi-structured interviews with teachers, student-participants and parents; field notes and observational data; qualitatively evaluated pre- and post-tests; work samples, school documents and academic records.

These data were rigorously analysed using grounded theory principles and an open coding approach to discover recurring themes. The analysis of each set of data informed further analyses of subsequent data sets in order to "build categories systematically from incident to incident and from incident to category" (Creswell, 2005, p. 396). Being guided by Glaser's emergent design practice of grounded theory (Glaser, 1992), emerging themes were identified as data were systematically analysed.

The data gathering and data analysis processes overlapped. The first phase of data analysis incorporated a process of line-by-line open coding, in order to remain "close to the data" at all times (Creswell, 2005, p. 234). At this stage, *in vivo* codes were used (the exact word and phrases of the participant) to "preserve participants' meanings of their views and actions in the coding itself" (Charmaz, 2006, p. 55). For example, Nathaniel's preliminary interviews emerged with a range of *in vivo* codes such as "don't", "sometimes", "didn't", "can't", "a few close friends", "smart" and "probably could do better". Additionally, regarding the same participant, preliminary interviews with his teachers emerged with the following *in vivo* codes: "huge amount of potential", "late homework", "perfectionist", "underachiever" and "capable of so much more", "victimised", "different" and "struggling relationships". These 'emic' codes were obtained directly from the data itself, as opposed to 'etic' codes which result from the imposition of a pre-determined theoretical framework onto the data (Glaser, 1992). Unity was then brought to these codes, and they were clumped together under an open coded name. Although reference has only been made to some of the preliminary data collected on one of the participants, all pre-

and post-intervention interview data and the researcher's field notes were analysed individually and collectively utilising this process.

The second phase of coding, focused coding (Charmaz, 2006), linked the codes within categories which became increasingly more conceptual, compared to the earlier stages of coding. In the final phase of coding, the emerging relationships between the categories of coding were represented visually to extend the process of conceptualising (Strauss & Corbin, 1988, p. 218). It became clear from pre-intervention teacher, parent and participant interviews pertaining to Nathaniel that there were recurring categories emerging: "negative feelings", "underachieving behaviours" and "socially asynchronous development". The aforementioned process was repeated for post-intervention interviews and the use of the emergent design approach was adopted to allow the authentic relationships between these categories to emerge (Glaser, 1992). Connections between these categories were drawn and connections were found across all data sets, called themes, from which the findings of this study have directly emerged. In reference to Nathaniel, these include the ideas of "negative feelings replaced by self-confidence", "reversing underachieving behaviours" and "trends towards socially synchronous development".

Furthermore, the pre- and post-tests and work samples were analysed according to pre-determined criteria based on the NSW Board of Studies English Stage 4 Syllabus documents, the current syllabus at the time of this study. To reduce bias, the pre- and post-tests were evaluated simultaneously by two analysts who provided qualitative feedback in light of the pre-determined criteria. For example, where Nathaniel's written narrative pre-test was determined to have no evidence of a conclusion, analysis of his post-test suggested a "clear vision for latter part of story" and "awareness of the big picture" of the narrative.

The same process was employed in the analysis of the data sets collected on Luke. Data from Nathaniel's case study has been referred to above with the purpose of providing evidence of the rigorous data collection and analysis processes employed in this study. Additional data on both case studies has been referenced in the Findings section of this article.

Findings

The findings of this study emerged from in-depth analyses of the multiple sources of data gathered during each of the case studies. As it was not the intention of this study to compare the characteristics of the two participants or their responses to the Creative Writing Program, the find-

ings from the two independent case studies are reported separately. Findings relating to the first case study (Nathaniel) have been presented first, followed by the findings from the second case study (Luke). Both sets of analyses were used to provide evidence to answer the study's two research questions. Consequently, the research questions have been answered in relation to Nathaniel, the first case study, and Luke, the second case study. Nevertheless, findings from both studies have also been considered alongside each other at the end of this section of the paper in order to draw commonalities that may help future teachers in their interactions with underachieving gifted students.

Case study 1: Nathaniel

Analyses of multiple sets of data found that the Creative Writing Program impacted Nathaniel in four main ways:

A marked change concerning his negative feelings, shown in an observable shift towards greater self-confidence.

A proclivity towards increased social interaction and group involvement as a result of growing self-confidence.

A reversal of some underachieving behaviours, including tendencies for prolonged deliberation or delay in commencing work.

Overall, the results of the study indicated a general trend towards improvement in the area of creative writing.

The initial data from the participant's pre-intervention interview suggested a lack of confidence, repeated underestimation and consequential negative feelings associated with his experiences of underachievement. This was evident in his pre-intervention interview through his repeated use of the phrase "I don't know" when responding to questions about his achievement, interests and underachievement. This was further corroborated by his parent's pre-intervention interview. She affirmed the notion of the participant's negative feelings, expressing Nathaniel's awareness of being "different" and alienated from his peers due to being labelled as a "clever kid". Interestingly, the pre-intervention interview with his teacher revealed an apparent contradiction: Nathaniel was described as being simultaneously positive in regards to "doing the work", yet unwilling to "try something he's not competent with". Thus, it emerged from multiple sources that Nathaniel experienced negative feelings and apprehensions about school in relation to his underachievement.

All data sources from pre-intervention interviews anecdotally confirmed Nathaniel's giftedness. Yet, his parent identified that "he ... couldn't bring [his ideas] out ... verbally. But it's all in his head." The researcher's

field notes substantiated the emergent theme of underachieving behaviours. Observations of Nathaniel's "deliberat[ions]" in the pre-testing phase, his struggle to articulate ideas, his deletion of work and ultimate inability to sustain a narrative provided evidence of his teacher's claim that "he [has] found positioning himself in another's skin an amazing challenge - he couldn't do it". She further asserted that his hesitations led to wasted class time.

Perhaps one of the most interesting initial findings was the theme of Nathaniel's social asynchronicity. Nathaniel attested that he had a "few close friends" in his pre-intervention interview. However, both teacher-participants noted that Nathaniel's social development appeared to be asynchronous with his intellectual development. They provided numerous anecdotes where the participant was unable to read the social cues of his peers. Furthermore, the participant's mother identified her son as having "low social skills" and with interests that were so divergent to those of his peers that they would "disperse" from him, ultimately rendering him isolated.

Consequently, the following themes emerged from the in vivo coding of the multiple pre-intervention data sets cited above: negative feelings, underachieving behaviours and social asynchronicity. Findings pertaining to the impact of the Creative Writing Program emerged as a result of comparisons of pre-intervention and post-intervention data, consideration of the researcher's field notes and observations, and analyses of the pre- and post-test.

The most profound difference in Nathaniel's post-intervention interview was the noticeable difference in his positive phrasing. His earlier underestimations and feelings of low self-esteem, particularly regarding creative writing, were no longer evident in his interview responses. Instead, terms such as "better at", "able to" and "do well" were repeated. He acknowledged, "My feelings have changed about what I can do". This emergent theme regarding a renewed sense of confidence was confirmed in his parent's interview. The participant's parent identified that the Program provided Nathaniel with the "ab[ility] to express himself" and "self-confidence because ... he [knew] that someone recognise[d] that he [had potential]". Furthermore, the parent noted the positive impact of Nathaniel having a "mentor" (the researcher) who "encourage[d] him". This theme was further corroborated through the researcher's field notes and the testimony of his English teacher.

Additionally, the analyses of the data suggested that the Creative Writing Program challenged some of Nathaniel's underachieving behaviours. Field notes indicated that Nathaniel never submitted a task late, often emailing it days before it was due. Additionally, his English teacher expressed he had "a considerable break-through in his learning and in his attitude" towards creative writing. Furthermore, the "quality of his ideas ... blossomed" and he became more willing to "commit his ideas to paper" in mainstream English classes.

Finally, in post-intervention interviews, it was interesting to see the theme of social development emerge. Nathaniel's teacher said she had witnessed Nathaniel take on leadership roles within the classroom, to which she attributed his increased confidence in his ability. She observed his capacity "to engage with group members, rather than being an isolate". The researcher's field notes furthermore indicated that Nathaniel's writing throughout the Program demonstrated a greater awareness of a social setting through his representation of a relationship between two main characters in his on-going narrative tasks. Although this does not prove that Nathaniel's social development became synchronous as a result of the Program, it is an interesting finding, indicating his trends towards increased social awareness.

The comparative analysis of the pre- and post-tests revealed that Nathaniel's mastery of literacy skills in terms of paragraphing, spelling, punctuation, grammar and his mature turn of phrase did not change, as both tests demonstrated his sophisticated grasp of language conventions. However, his post-test exhibited a much clearer vision and foresight for the latter part of the narrative. Another interesting disparity between the pre- and post-test was that Nathaniel's ability to create empathy through his construction choices and characterisation by the end of the Program. Ultimately, his post-test was a more sustained and sophisticated written narrative. Thus, his writing quality notably improved through the duration of the Creative Writing Program.

To answer the second research question, the data were also analysed to ascertain teaching and learning strategies that the various participants perceived as successful. Analyses of multiple sets of data found that the following teaching strategies from the Creative Writing Program were successful in encouraging Nathaniel towards achievement of his potential: one-to-one teaching, positive teacher identification; and individualised and differentiated teaching strategies.

Nathaniel himself identified that the one-to-one teaching gave him the ability to "concentrate better". However, he did state it was initially "awkward" leaving mainstream classes. Additionally, analyses of the post-intervention interview data of Nathaniel's teacher confirmed that Nathaniel had benefited from the one-to-one learning experience stating that "kids like Nathaniel need one-to-one ... where it's almost like a tutoring system where they're withdrawn from class sometimes and given this extension."

Additionally, all data sources affirmed the beneficial impact of positive teacher identification. One of the teachers involved in this study stated that, for Nathaniel, "connection is everything". Furthermore, the aforementioned parent's interview data corroborated the necessity of the teacher to act as a "mentor" in order to partner with Nathaniel to help him realise his potential. By the end of the Program the researcher had built rapport with Nathaniel: he was far less reserved and notably more willing to participate actively.

The final learning strategy that emerged from the analyses of data was the necessity of individual differentiation to meet Nathaniel's learning needs. Analyses of his teacher's post-intervention interview substantiated this theme, as she stated that the Creative Writing Program provided Nathaniel with the opportunity to be challenged "at the level that he needs to be challenged at". Nathaniel's own earlier assertions of "bored[om]" in the classroom, were addressed in the Creative Writing Program's multi-pronged differentiated approach as timing and pace was tailored to his needs. The on-going cumulative project of the Creative Writing Program was effective in not "squench[ing] the thinker in him" by prolonging activities or requiring performance under time constraints. Thus, data analyses made it evident that learner-oriented pace and process; individualised attention and feedback; and, a differentiated learning environment promoted the achievement of Nathaniel's potential.

Analyses of multiple sets of data found that the Creative Writing Program impacted Luke in the following ways:

A marked change concerning his negative feelings, shown in an observable shift towards greater self-confidence, positive attitude towards learning, and feelings of self-worth.

A reversal of some of his underachieving behaviours, including carelessness.

A general trend towards improvement in the area of creative writing.

Data analyses of the pre-intervention interview with Luke revealed that he had negative attitudes about school. Although he was able to identify subjects that he liked, he described school as "dull" and "boring". Despite confidently describing himself as "smart", he could not identify any personal "outstanding achievements" and perceived himself as "between above average and average" in terms of academic performance. Additionally, his parents' pre-intervention interviews affirmed the notion of the participant's negative feelings towards school. One parent stated that he "doesn't respond well to structure ..." and the other "[couldn't recall] anything he's particularly positive about [in regards to school]". However, his love for learning and passion for literature was evident from all data sources. The researcher observed on repeated occasions the participant perusing the Library prior to his withdrawal sessions and noted his familiarity with a range of sophisticated canonical texts.

All pre-intervention data sets indicated that Luke exhibited behaviours that contributed to his underachievement. Both teachers noted his inconsistency, stating he could be "exceptional" sometimes and "very average" at other times. Additionally, Luke was described as "careless" with his work and "lazy thinker because he finds it so easy". This notion of inconsistency furthermore emerged in his parents' pre-intervention interview as one parent identified that "if he's not interested ... he tends to try to get out of it as quick as he can." Luke himself admitted that he "could do a bit better" and confessed to avoiding homework.

Consequently, the following themes emerged from the in vivo coding of the multiple pre-intervention data sets cited above: negative feelings and underachieving behaviours. Findings pertaining to the impact of the Creative Writing Program emerged as a result of comparisons of pre-intervention and post-intervention data, consideration of the researcher's field notes and observations, and analyses of the pre- and post-test.

Post-intervention data identified a significant shift in the participant's self-perception. Where Luke had defined himself as "strange" at the beginning of the Program, he described himself as "happy" at the end of the Program. Data analyses emphasised this as the repeated phrase "can do" emerged in his post-intervention interview. The participant's parent stated that "this is the first time in a long time he looked forward to going to school" as he was "proud of himself for being in the Program". This, the parent noted, was the "only time he has told me he is proud of himself." Additionally, it was identified by the participant's other parent that involvement "boosted [Luke's] confidence" as "it made him feel special."

This notion of self-confidence was further corroborated by the teacher involved in this study, who explained that the "most notable change ... has been in his own positive self-esteem."

Additionally, his teacher stated that "acknowledging [Luke's] potential has been a very valuable part of his learning" as this has led to "more pride in what he does." Many of the data sources confirmed that the Creative Writing Program encouraged a reversal of some of Luke's underachieving behaviours. As the Program progressed, Luke was less inclined to rush his work. The researcher's field notes observed that "Luke showed evidence of re-reading and editing his work, which is something I didn't see last time ...". Luke himself claimed that he had better focus as a result of participating in the Program. However, the researcher's field notes suggest that there was no significant impact on Luke's organisational skills as Luke made many excuses for non-completion of homework tasks.

The comparative analysis of the pre- and post-tests revealed an improved quality of his narrative writing by the end of the Program. In particular, Luke's use of paragraphing was more mature and thoughtful. His punctuation was more consistent, indicative of his ability to craft and edit his work effectively. Notably, there were no carelessly long sentences, as there were in his pre-test. Ultimately, his post-test was a more sustained and sophisticated written narrative.

To answer the second research question, the data were also analysed to ascertain teaching and learning strategies that the various participants perceived as successful. Analyses of multiple sets of data found that the following teaching strategies from the Creative Writing Program were successful in encouraging Luke towards achievement of his potential: one-to-one teaching; and individualised and differentiated teaching strategies.

One of the most consistently evident themes was that one-to-one teaching would and ultimately did benefit Luke. Luke appreciated that there were "no other distractions and no one else disturbing [him]". His teacher claimed this strategy helped him become "better organised" and "accountable" for his learning. Additionally, she stated the value in him having an opportunity to have a "voice" in a more "personal context", which she believed was instrumental in instilling Luke with confidence. This was corroborated by Luke's parent who also established a link between individualised attention and increased confidence, stating that he felt "special". The researcher's observations confirmed this notion, as Luke was able to ask for help without fear of his peers' judgment.

The second learning strategy that emerged from the analyses of data was the necessity of individual and interest-based differentiation to meet Luke's learning needs. Analyses of all data sets identified that Luke's motivation was fundamentally dependent on his interest. Luke stated that he would put effort into assignments that he found interesting, but avoid others. Both parents noted the need for Luke to experience "individualised" and tailored education in order to succeed. Luke's teacher, in her post-intervention interview, noted that withdrawal from mainstream classes and the "individualised attention" and feedback from a teacher encouraged Luke to "take more care with the process of writing and to think more deeply, rather than impulsively". The researcher differentiated the Creative Writing Program according to Luke's interest to hook him, using the platform of an online blog as a means for publishing his work and tailoring the study of narrative to his preferred genre. Thus, the learner-oriented activities and process, and differentiated learning environment were effective in encouraging Luke's achievement of potential.

Therefore, the teaching strategies that were identified as being successful with Luke included: one-to-one teaching; and individualised and differentiated teaching strategies.

Figure 2 represents the synthesis of the findings on Luke, as a result of triangulated data analysis, showing the teaching strategies as cogs or gears that worked together to impact upon the themes that emerged from data analysis at the beginning of the Program: negative feelings and underachieving behaviours. The teaching strategies outlined in Figure 2 impacted on Luke's negative feelings, and made some impact on his underachieving behaviours.

Summary of findings across the two case studies

The key finding of this study was that, even though similar themes emerged in the data between Nathaniel and Luke, there were distinct variations within those themes. Nathaniel and Luke were different types of underachievers, and yet the Creative Writing Program was seen to be effective in impacting their different manifestations of underachievement. The findings of this study have further confirmed the diversity of underachieving gifted students' needs as identified by Betts and Neihart's (1988). Underachieving gifted students have been found to underachieve for different reasons, they display different underachieving behaviours, and they can have diversely-motivated negative feelings.

The findings of this research provides evidence that specific teaching strategies can be implemented to facilitate the achievement of potential in

underachieving gifted students, including: one-to-one teaching, positive teacher identification and differentiation. Four main recommendations for practice have derived directly from these findings: use of one-to-one teaching strategies; the necessity of positive teacher-student relationships; the value of differentiation; and, the use of multiple approaches to address underachievement. The Creative Writing Program, designed purposefully for this research, impacted the two underachieving gifted students, Nathaniel and Luke, by way of replacing their negative feelings with self-confidence and reversing some of their underachieving behaviours. Furthermore, the Creative Writing Program made an impact on Nathaniel's social asynchronicity.

Discussion

This research has contributed additional information to our current understanding of the characteristics of underachieving gifted students and the possible reasons for such characteristics. Furthermore, the findings reported above indicate that negative feelings, underachieving behaviours and social asynchronicity in two underachieving gifted students can be impacted by a program, such as the Creative Writing Program, that employs successful teaching strategies such as one-to-one teaching, positive teacher identification and various forms of differentiation. In some areas, the outcomes from this study have updated and revised findings from 30 year old studies, such as Whitmore's (1980) work, especially in relation to how a purposefully designed program for individual students can improve the self-confidence of underachieving gifted students.

Findings from the two case studies in this paper indicate that both participants had negative feelings, attitudes or insecurities at the beginning of the Program. This finding is consistent with previous research which has found underachieving gifted students are often characterised by their low self-concept or self-esteem (Betts & Neihart, 1988; Davis, et al., 2011; Dowdall & Colangelo, 1982; Fine & Pitts, 1980; Gallagher, 1991; McCoach & Siegle, 2003; Montgomery, 2009; Reis & McCoach, 2000; Whitmore, 1980). Although this is a common theme in the literature, this study identified that Nathaniel and Luke had negative feelings for different reasons. One student demonstrated constant self-underestimation, doubted his abilities and struggled with the social aspects of school. The second student's negative attitudes stemmed from a lack of enjoyment in school, a lack of self-confidence and low self-esteem. This finding adds to the body of literature concerning negative feelings and low self-esteem in underachieving gifted students (Betts & Neihart, 1988; Davis, et al., 2011;

Dowdall & Colangelo, 1982; Fine & Pitts, 1980; Gallagher, 1991; McCoach & Siegle, 2003; Montgomery, 2009; Reis & McCoach, 2000; Whitmore, 1980).

Kulik (2003) identified that gifted students' self-image tends to be higher when they are ability grouped, or withdrawn from mainstream classes. Similarly, this study showed how a one-to-one strategy could instil feelings of self-confidence in an underachieving gifted student. Furthermore, Whitmore (1980) identified the important role of the teacher in promoting self-esteem in underachieving gifted students. Kendrick (1998) and Haensly (2003) found that recognition of potential, personal attention and feelings of being valued by the teacher built self-confidence in an underachieving gifted student. The study documented in this article has provided further evidence of the link between positive teacher identification, self-confidence and achievement in the underachieving gifted student.

Many authors (Emerick, 1992; Fine & Pitts, 1980, p. 53; Reis & McCoach, 2000, p. 165; Rowley, 2008, p. 36; Whitmore, 1980, p. 398) have suggested that differentiation could be successful for remediating underachievement in gifted students. However, Reis and McCoach (2000) identified this as an area that needed further research to determine the effectiveness of this as a strategy in reversing underachievement in gifted students (p. 166). Differentiation was demonstrated to be a teaching strategy that was successful in facilitating the achievement of potential in both students in this study, but different aspects of differentiation were required for each student. The data suggested the following differentiation was successful for the participants in this case study: an individualised and student-tailored approach to activities, pace and process; one-to-one student-teacher ratio and support; and a differentiated learning environment. Sisk (2009) claimed that there is a myth that the regular classroom teacher "can go it alone" with differentiation, when in actual fact without "professional development and the willingness to address the individual needs of gifted students" teachers will struggle to implement effective differentiation (p. 270). These findings add to the limited findings about practical strategies that have been investigated to date in previous literature (Gallagher, 1991; McCoach & Siegle, 2003; Reis & McCoach, 2000; Whitmore, 1980).

In addition to avoidant behaviour, some previous research studies have indicated that underachieving gifted students can find social situations difficult (Betts & Neihart, 1988; Montgomery, 2009). One of the two participants in this study displayed an intellectual development that was

far ahead of his social development but as a result of his involvement in the Creative Writing Program he exhibited increased social synchronicity in his mainstream classroom. This finding has contributed evidence to the current body of research about social synchronicity of underachieving gifted students (Betts & Neihart, 1988; Montgomery, 2009; Whitmore, 1980), suggesting that feelings of social asynchronicity do, in fact, appear to be characteristic of some underachieving gifted students.

An important finding of this study was that relationships are important for remediating underachievement in gifted students: a notion confirmed by existing literature. Davis, Rimm and Siegle (2011) found that once a student identifies with a role model and realises that the costs involved in working to their potential are worthwhile, then the student's underachieving behaviours will typically begin to reverse (p. 319). Similarly, Gagné's (1993, 2007) theory of giftedness indicates that teachers are one of the environmental catalysts that can impact the translation of a student's potential into demonstrated performance. Likewise, the findings from Emerick's (1992) research found students who reversed their underachievement attributed it to a teacher who had been a positive role model or inspiration for them. Emerick (1992) suggested that the role of the teacher was significant for the reversal of underachievement in gifted students. This study has investigated this assertion further, and found that positive teacher identification facilitated the achievement of potential one of the participants.

In consideration of all of the study's findings in relation to the previous research, it should be noted that underachieving gifted students are a diverse group with diverse manifestations of underachievement and, therefore, require a range of approaches and strategies for intervention (Betts & Neihart, 1988; Reis & McCoach, 2000, p. 166; Rowley, 2008; Whitmore, 1980). It is apparent, from the findings of this study as well as the findings from existing literature, that there is no single strategy that will necessarily work to reverse all forms of underachievement in gifted students.

In light of the issues addressed in the discussion of the study's findings above, some recommendations for practice are now presented in conjunction with findings identified from previous research.

Recommendations for practice

The recommendations for practice, which have become apparent from the findings of this study, are significant because they provide practical direction for teachers of underachieving gifted students. Four clear rec-

ommendations for practice have emerged from this research project. Although it is not suggested that these recommendations will be generalisable for all students, these recommendations are intended for consideration by teachers of underachieving gifted students.

Recommendation 1: Encourage the development of one-to-one teaching opportunities for underachieving gifted students

One-to-one teaching proved successful in this study for both of the underachieving gifted participants described in the case studies. Both students benefited from the accountability and individualised attention that one-to-one teaching provided them. The level of engagement offered by one-to-one teaching opportunities may play a role in reducing the risk of gifted underachieving students dropping out in high school (Landis & Reschly, 2013). If one-to-one teaching is not possible, due to time and budgetary constraints of the school which Hoover-Schultz (2005) identified as a possibility, teachers are recommended to find ways to implement a smaller teacher-student ratio to give opportunities for the voice of the underachieving gifted student to be heard.

Recommendation 2: Promote positive teacher-student relationships with underachieving gifted students

Positive teacher identification was a key component that facilitated the achievement of potential in Nathaniel, one of the student-participants in this study. This finding is aligned with the substantial literature (Davis, et al., 2011; Emerick, 1992; Gagné, 1993, 2007) that has indicated teachers have a profound impact on the achievement of potential in achieving gifted students. This was an effective strategy in the context of the Creative Writing Program that could be implemented in mainstream classrooms. This may start with addressing teacher attitudes towards giftedness and underachievement and providing additional training to equip teachers with ways to effectively identify and engage with these students.

Recommendation 3: Differentiate for underachieving gifted students

Differentiation was a teaching strategy that was found to be effective with two underachieving gifted students, when it was utilised according to their individual learning needs. This was an effective strategy in the context of the Creative Writing Program described in this article: a flexible program that adapted to the needs, learning style and interests of the students where possible. Additionally, the provision of a differentiated learning environment and individualised support throughout the learning process was central to the Program's success. However, the existing literature indicates a need for teacher training in order for teachers to effectively dif-

differentiate their teaching for underachieving gifted students in the classroom (Sisk, 2009). Nevertheless, underachieving gifted students need differentiation according to their interests, differentiated curriculum content and a differentiated pedagogical approach. In order to facilitate the achievement of potential, the underachieving gifted student's education must be tailored to their unique needs.

Recommendation 4: Develop multiple strategies

The findings of this study, which align with many of the findings reported in the previous literature on giftedness, have emphasised the need for "developing multiple approaches" to deal with underachievement in gifted students (Reis & McCoach, 2000, p. 166). Underachievement manifests in a range of ways (Betts & Neihart, 1988; Davis, et al., 2011; Reis & McCoach, 2000) and, consequently, a range of intervention strategies should be tailored to the needs of the individual underachieving gifted students, for the strategies to be successful in remediating underachievement.

These four recommendations are offered to educators of students identified as gifted underachievers. Educators may consider these recommendations if they appear to be relevant to their own teaching contexts.

Findings from this study indicate a range of avenues for future research. As positive teacher identification was found to facilitate the achievement of potential in an underachieving gifted student, it may be worthwhile to conduct further research into teachers' knowledge of and attitudes towards underachieving gifted students. Furthermore, it may be valuable to ascertain the impact of these attitudes on underachievement in gifted students.

To further investigate the individual ways in which underachievement manifests in gifted students, this study could be replicated with more case study participants. Alternatively, future research could replicate this study in association with other key learning areas, such as mathematics, science or history, to investigate the impact of intervention strategies on underachieving gifted students in areas other than creative writing.

There are significant research findings that suggest ability grouping can be beneficial for gifted students. Future research could build from this and investigate the impact of one-to-one teaching on a greater range of underachieving gifted students. Additional studies could be conducted to find successful strategies to facilitate the achievement of potential in underachieving gifted students. For example, the development of strategies for building self-confidence in underachieving gifted students may prove

successful for remediating academic underachievement. This is an area that requires further investigation.

As it has been found to be successful in this study, methodologically it may be beneficial for further research to employ:

case study approaches to investigate individual manifestation of underachievement in gifted students and strategies for intervention that align with participants' needs;

an extended timeframe; and

multiple sources of data gathering to provide a comprehensive picture of underachievement in a gifted individual.

Finally, future research into the reasons behind and the outcomes of underachievement in gifted students should continue to include the perspective and voice of the underachieving gifted student, a concern also cited by Coleman, Micko and Cross (2015), as modelled in this study.

Conclusion

The research study, reported in this article, employed two separate in-depth case studies to answer the following two research questions:

What is the impact of a specifically designed part-time withdrawal program (the Creative Writing Program) on an underachieving gifted student?

What teaching strategies are successful in facilitating the achievement of potential in an underachieving gifted student?

Data were gathered from multiple sources and perspectives to answer these research questions in relation to two student participants. In order to answer the first research question, the Creative Writing Program was found to have impacted on Nathaniel in terms of increased self-confidence; reversal of some underachieving behaviours; and, trends towards improved social synchronicity. The Creative Writing Program was also found to have impacted on Luke in terms of increased self-confidence and reversal of some underachieving behaviours. Overall, the Program impacted on both underachieving gifted students in ways that positively affected their personal and academic development.

In order to answer the second research question, this study identified three teaching strategies that were found to be successful in facilitating the achievement of potential in two underachieving gifted students. For Nathaniel, the following teaching strategies were found to be successful: one-to-one teaching, positive teacher identification, and differentiation. For Luke, two teaching strategies were found to be successful: one-to-one teaching and interest-based differentiation. Overall, these findings suggest

that successful teaching strategies for underachieving gifted students may involve recognising students' individual characteristics and tailoring approaches to suit each student.

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